

S/137/61/000/011/012/123
A06Q/A101

AUTHOR: Voytov, A.O.

TITLE: Control of the thermal schedule of open-hearth smelting, and its automation

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 15, abstract 11B88 (V sb. "Novoye v teorii i praktike proiz-va martenovsk. stali", Moscow, Metallurgizdat, 1961, 227-236, Discussion 332 - 334)

TEXT: In order to control the process it is sufficient to take into account the combined effect of several of the most important factors, which may be studied by the use of the method of correlation analysis with estimation of the probability of the results. On the basis of an investigation carried out upon the open-hearth furnaces of the plant "Zaporozhstal", heated by a blast-furnace-coke mixture with O_2 fed to the tongue, a number of equations were derived. The dependence of the heat assimilation of the charge during the priming upon the regulating processes is represented in the form of the equation $q_{assim} = 33.40 - 15.15\alpha + 2.00 K - 2.50 \tau$, where α is the excess air coefficient; K is the O_2 expenditure in the flame in thousands of nm^3/hr ; τ is the duration of the priming period

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in hours. The multiple correlation coefficient R is equal to 0.950, the reliability of the multiple correlation exceeds 0.999. The mean square error of the calculated determination is $1.25 \cdot 10^6$ kilocalories/hour, and the part of the dispersion caused by the influence of factors unaccounted for constitutes 11%. The multiple regression equation makes it possible to estimate the effectiveness of each of the regulating actions under the conditions of combined action of the factors taken into account. Thus, a $1 \cdot 10^6$ kcal/hr (7%) change in the heat assimilation causes a change in O_2 expenditure of 500 m³/hr, or a change in the excess air coefficient of 0.07, or a change in the priming duration of 0.4 hrs. The influence of the thermal load upon the heat assimilation of the charge under the conditions of use is not established with sufficient clarity because of the small range of variation of the thermal loadings. Thus, during the priming period the factors which affect most strongly the heat assimilation of the charge are the O_2 expenditure and the excess air coefficient. The equation for the initial heating period has the form $q_{ass} = 18.38 + 0.33 q_T - 12.77 \alpha + 1.60 K - 1.24 \tau$, where q_T is the thermal load in millions of kilocalories/hr. In that case $R = 0.880$, the mean square error is $1.46 \cdot 10^6$ kcal/hr, $D = 22.9\%$. Under the conditions of regulating the air excess the control actions are the heat and the O_2 expenditures. For the smelting period under the combined effect of the O_2 expenditure and that of

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the air excess coefficient the smelting duration $\tau = 3.75 - 0.53 K - 0.17\alpha$. The inclusion of two more factors: the thermal load and the weight of the ore in the charge into the equation does not raise the accuracy of the determination of τ . In this case the main regulating action is exerted by the O_2 feed, which makes it possible to compensate for deviations of the smelting duration of up to 1.5 hours by varying K from 0 to 3000 nm³/hr. During this period the effectiveness of O_2 utilization is higher than that during the period of priming and heating up.

Yu. Nechkin

[Abstracter's note: Complete translation]

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YUPKO, L.D.; TRUBETSKOV, K.M.; GURSKIY, G.L.; TEREKHOV, I.A.; GUSEV, V.F.;
VOYTOV, A.O.

Accelerating open-hearth furnace smelting with an increased use of
oxygen. Stal' 23 no.1:16-19 Ja '53. (MIRA 16:2)

1. Zavod "Zaporozhstal'", Tsentral'nyy nauchno-issledovatel'skiy
institut chernoy metallurgii i Tsentroenergochermet.
(Open-hearth process) (Oxygen---Industrial applications)

TRUBETSKOV, K.M., kand.tekhn.nauk; KORNFEL'D, V.N., kand.tekhn.nauk
GREKOV, Ye.A., inzh.; VCYTOV, A.O., inzh.; SHTEYNBERG, L.S., inzh.;
LOMTATIDZE, G.A., inzh.:

Investigating the melting of the open-hearth furnace charge with
various methods of using oxygen [with summary in English]. Stal'
21 no.3:214-222 Mr '61. (MIRA 14:6)
(Open-hearth furnaces) (Oxygen--Industrial applications)

VOYTOV, A. O.

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PHASE I BOOK EXPLOITATION

BOV/5556

Moscow. Institut stali.

Novoye v teorii i praktike proizvodstva martenovskoy stali (New [Developments] in the Theory and Practice of Open-Hearth Steelmaking) Moscow, Metallurgizdat, 1961. 439 p. (Series: Trudy Mezhdunarodnogo nauchnogo soveshchaniya) 2,150 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy institut stali imeni I. V. Stalina.

Eds.: M. A. Glinkov, Professor, Doctor of Technical Sciences, V. V. Kondakov, Professor, Doctor of Technical Sciences, V. A. Kudrin, Docent, Candidate of Technical Sciences, G. N. Oyks, Professor, Doctor of Technical Sciences, and V. I. Yavovskiy, Professor, Doctor of Technical Sciences; Ed.: Ye. A. Borko; Ed. of Publishing House: N. D. Gromov; Tech. Ed.: A. I. Karasev.

PURPOSE: This collection of articles is intended for members of scientific institutions, faculty members of schools of higher education, engineers concerned with metallurgical processes and physical chemistry, and students specializing in these fields.

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New [Developments] in the Theory (Cont.)

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COVERAGE: The collection contains papers reviewing the development of open-hearth steelmaking theory and practice. The papers, written by staff members of schools of higher education, scientific research institutes, and main laboratories of metallurgical plants, were presented and discussed at the Scientific Conference of Schools of Higher Education. The following topics are considered: the kinetics and mechanism of carbon oxidation; the process of slag formation in open-hearth furnaces using in the charge either ore-lime briquets or composite flux (the product of calcining the mixture of lime with bauxite); the behavior of hydrogen in the open-hearth bath; metal desulfurization processes; the control of the open-hearth thermal molting regime and its automation; heat-engineering problems in large-capacity furnaces; aerodynamic properties of fuel gases and their flow in the furnace combustion chamber; and the improvement of high-alloy steel quality through the utilization of vacuum and natural gases. The following persons took part in the discussion of the papers at the Conference: S.I. Filippov, V.A. Kudrin, M.A. Glinkov, B.P. Nam, V.I. Yavoykiy, G.N. Oys and Ye. V. Chelishchev (Moscow Steel Institute); Ye. A. Kazachkov and A. S. Kharitonov (Zhdanov Metallurgical Institute); N.S. Mikhaylets (Institute of Chemical Metallurgy of the Siberian Branch of the Academy of Sciences USSR); A.I. Stroganov and D. Ya. Povolotskiy (Chelyabinsk Polytechnic Institute); P.V. Umrikhin (Ural Polytechnic Institute); I.I. Fomin (the Moscow "Serp i molot" Metallurgical Plant); V.A. Fuklev (Central Asian Polytechnic Institute).

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New [Developments] in the Theory (Cont.)

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and M.I. Beylinov (Night School of the Dneprodzerzhinsk Metallurgical Institute).
References follow some of the articles. There are 268 references, mostly Soviet.

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Foreword

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Yavoyevskiy, V. I. [Moskovskiy institut stali - Moscow Steel Institute].
Principal Trends in the Development of Scientific Research in Steel
Manufacturing

7

Filippov, S. I. [Professor, Doctor of Technical Sciences, Moscow Steel
Institute]. Regularity Patterns of the Kinetics of Carbon Oxidation
in Metals With Low Carbon Content
[V. I. Antonenko participated in the experiments.]

15

Levin, S. L. [Professor, Doctor of Technical Sciences, Dnepropetrovskiy
metallurgicheskoy institut - Dnepropetrovsk Metallurgical Institute].

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New [Developments] in the Theory (Cont.)

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6

Butakov, D.K. [Docent, and L. M. Val'nikov [Engineer] [Ural Polytechnic Institute]. Improving the Quality of Steel by Treating It in Ladles With Solid Fluxes and Liquid Slags

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Discussion of Papers

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Gliniov, M.A. [Moscow Steel Institute]. Heat-Engineering Problems in the Automatic Control of Furnaces

202

Kocho, V.S. [Professor, Doctor of Technical Sciences], and V. I. Grankovskiy [Engineer] [Kiyevskiy politekhnicheskii institut - Kiyev Polytechnic Institute]. Investigating the Thermal Performance of the 500-Ton Open-Hearth Furnace

210

Kocho, V.S. Automatic Regulation of Gas Temperature in Open-Hearth Furnaces

219

Voytov, A.O. [Engineer, TsENTROENERGOCHERMET]. Control and Automation of the Thermal Regime in the Open-Hearth Process

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SOV/133-59-6-13/41

AUTHORS: Kornfel'd, V.N., Candidate of Technical Sciences,
Voytov, A.O., Koshelev, V.I., Shorin, A.F. and
Dymov, B.K., Engineers

TITLE: Thermal Performance of an Open Hearth Furnace when
Blowing Oxygen or Oxygen Water Mixture into the Bath
(Teplovaya rabota martenovskoy pechi pri produvke
metalla)

PERIODICAL: Stal', 1959, Nr 6, pp 513-520 (USSR).

ABSTRACT: Thirty eight experimental heats with blowing oxygen
into the metal bath were carried out on a 200 ton open
hearth furnace operating with 70% of hot iron. The
moment of the beginning of blowing was varied. In
order to decrease the formation of fumes during blowing
in some heats, water was introduced into the oxygen
stream (0.7 - 0.9 litres per 1 m³ of oxygen). The
consumption of oxygen during blowing varied from 25 to
35 m³/min and when using water additions from 27 to
37 m³/min. Thermal load during the experimental heats
was manually controlled on the basis of systematic
analyses of the combustion products in vertical flues

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and temperatures of the roof (magnesite chromite) and the top of the air regenerators (upper layers - forsterite bricks). In some moments of the heats the thermal load was limited by draught capacity of the furnace. The oxygen supply to flame was cut off during blowing period in order to economise oxygen. The experimental results obtained are shown in Figures 1 - 8. It was found that: 1) Due to an acceleration of decarburisation of metal and an intensification of the evolution of CO from the bath, thermal load during blowing is considerably decreased. Correspondingly the mean thermal load for the whole decarburisation period (from charging of hot iron to the end of blowing) also decreases. 2) When the blowing is started at an optimal moment, the course of heat in the thermo-technological sense substantially differs from the usual one for the open hearth process. Under experimental conditions the mean thermal load during blowing was decreasing to 14 million cal/hr, whereupon

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during 30 - 40 minutes it actually amounted to 5 - 6 mil cal/hr and during 15 - 20 minutes of the most violent evolution of CO from the bath, the supply of fuel was completely stopped. 3) The mean thermal load for the whole decarburising period (from charging hot iron to end of blowing) was actually determined by the proportion of the period taken for blowing; the earlier the blowing was started, the lower was the mean thermal load for this period. 4) The absorption of heat by the bath (per unit of time) and the coefficient of the utilisation of the furnace working space increases during blowing. On average during blowing as well as during the decarburisation period the above factors were higher the earlier blowing was started. 5) The period of decarburisation decreases more, the earlier blowing is started, whereupon the rate of decrease of the decarburising period increases faster than the rate of increase of the rate of heat absorption by the bath. Therefore, if blowing was started too early, the metal remains

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insufficiently heated when the blowing is finished and it is necessary to heat it further under inconvenient conditions of decarburised bath. A rational relationship of the duration of the decarburising period and intensity of heating up metal will be obtained only if the blowing is started at an optimal moment, as only then will the maximum thermo-technical effect be obtained. Under experimental conditions, the average specific consumption of conventional fuel for heats in which the blowing was started at the optimum moment decreased to 87 kg/t (with specific consumption of oxygen 37 m³/t, including 22 m³/ton added to flame before starting blowing). 6) On the addition of water to the stream of oxygen for the prevention of excessive fuming, the abovementioned relationship remains valid. However, as a proportion of heat is consumed for the evaporation of water and heating up of the steam formed to a

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temperature of the products of combustion, the decarburisation process proceeds less intensively and the heat absorption by the bath and the thermal coefficient of utilisation of the furnace working volume are lower than on blowing oxygen alone. The minimum average specific fuel consumption for heats in which the blowing with the oxygen-water mixture was commenced at the optimum moment for the experimental condition amounted to 107 kg/ton for the whole heat (at the same oxygen consumption as on blowing oxygen alone). 7) In the course of heats with blowing oxygen or oxygen water mixture, the temperature conditions of the furnace lining do not differ materially from ordinary heats, providing the thermal load is controlled according to the intensity of the evolution of carbon monoxide from the bath and normal conditions of normal combustion in the working volume are maintained. A high velocity of the processes taking place during blowing requires continuous watching of the thermal conditions of the heat (an appropriate automation of

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the control of this process is necessary). 8) Under the experimental conditions the optimum moment for the beginning of blowing was found to be between 60 and 80 minutes after the beginning of charging of liquid iron. The optimum moment can be shifted nearer to the time of charging liquid iron, by decreasing the proportion of the cold component of the charge. However, the advisability of such a measure should be determined under the actual conditions of the economy of the process as a whole. There are 8 figures and 4 Soviet references.

ASSOCIATION: Tsentroenergochermet i Moskovskiy institut stali
(Tsentroenergochermet and Moscow Institute of Steel)

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SEL'KIN, G.S., inzh.; TRUBETSKOV, K.M., kand.tekhn.nauk; GRUKOV, Ye.A.,
inzh.; ZADALYA, N.P., inzh.; VOYTOV, A.O., inzh.; MITROPANOV, A.A.,
kand.tekhn.nauk

Direct oxidation of the open-hearth bath with an oxygen-water mixture.
Kislород 11 no.6:3-7 F '59. (MIRA 12:3)
(Open-hearth process) (Oxygen--Industrial applications)

5(2)

AUTHORS:

SOV/67-58-6-2/22
Sel'kin, G. S., Engineer, Trubetskov, K. M., Candidate of
Technical Sciences, Gromov, Ye. A., Engineer, Zadalya, N. P.,
Engineer, Voytov, A. O., Engineer, Mitrofanov, A. A., Can-
didate of Technical Sciences

TITLE:

Direct Oxidation of the Martin Tank by an Oxygen-Water Mixture
(Pryamoye okisleniye martenovskoy vanny kislorodo-vodyanoy
smes'yu)

PERIODICAL:

Kislorod, 1958, Nr 6, pp 3 - 7 (USSR)

ABSTRACT:

In the production of steel from cast iron, the latter was
submitted to oxygen blowing in the melting tank, for the
purpose of carbon burning. This process was accompanied
by very high temperatures. Iron evaporated and formed a large
amount of melt dust, which impair the refractory furnace
lining and caused its premature destruction. By blowing with
an oxygen-water mixture it was intended to reduce dust for-
mation (30-35 m³ oxygen, 40 l water; later on during the
course of process, 30 l water). The investigations were
carried out with two Martin furnaces of the "Zaporozhstal'"
factory. Academician I. P. Bardin supervised the work. The

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Direct Oxidation of the Martin Tank by an Oxygen-Water
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use of oxygen-water blast in the melting and tapping of low-carbon-content steel processing increased the furnace efficiency by 7-7.5%. The fuel consumption decreased by 7%, as compared to melting with oxygen blast. The quantity of liquid steel is somewhat less than that obtained by pure oxygen blast which is due to the ore consumption for the melt being a little lower. The best moment to begin blowing is about 80 minutes after the cast iron has begun flowing in, and the process is ended when the carbon content is higher by 0.02% than before deoxidation. In the melting of steels with a medium carbon content, the furnace efficiency was increased by 5-6%, whereas fuel consumption was lower by 2-3%. The hydrogen content in the boiling metal does not exceed the admissible quantity. The use of an oxygen-water mixture for blast has proved an efficient means for diminishing melt dust. Moreover, all impurities are thus separated. There are 3 figures, 2 tables, and 6 references, 4 of which are Soviet.

Card 2/2

PERVETEV, F.Ya.; VOYTOV, A.P.

Interaction between $C\alpha$ -oxides of the acetylenic series and hydro-
nitric acid. Vest. LNU 20 no.4:151-153 '65.

(MIRA 18:4)

PERVEYEV, F.Ya.; VOYTOV, A.P.

Interaction of α -oxides of the acetylenic and vinylacetylenic
series with nucleophilic reagents. Part 1. Zhur.org.khim, 1
no.2:226-229 F 163.
(MIRA 18:4)

1. Leningradskiy gosudarstvennyy universitet.

ETTINGER, I.L.; DMITRIYEV, A.M.; BOGDANOVA, Ye.M.; VOYTOV, G.I.

Some characteristics of the sorption properties of the anthracite
of the eastern Donets Basin. Dokl. AN SSSR 156 no. 5:1099-1101
Je '64. (MIRA 17:6)

1. Institut gornogo dela im. A.A.Skochinskogo. Predstavleno
akademikom N.V.Mel'nikovym.

MATVILENKO, N.G., kand. tekhn. nauk; VOYTOV, G.I., kand. tekhn. nauk

Gas liberation during ore mining in igneous rock. Bezop. truda
v prom. 8 no.12:23-24 D '64. (MIRA 18 3)

1. Institut gornogo dela im. A.A. Skochinskogo.

VOYTOV, G. I., kand.tekhn.nauk

Gas content of ore deposits. Gor.zhur. no.8:68-70 1g '65.

(MIRA 18:10)

VOYTOV, G.I., inzh.; POLYANSKIY, M.N., inzh.; FRIDMAN, A.I.,
kand. geologo-miner. nauk

Nature of gas occurrences in mines of the Khibiny apatite-
nepheline deposits. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:
39-44 '63. (MIRA 16:7)

1. Moskovskiy geologorazvedochnyy institut imeni Ordzhonikidze.
Rekomendovana kafedroy goryuchikh iskopayemykh.
(Khibiny Mountains--Mine gases)

VOYTOV, G.I., inzh.

Gases in the Khibiny apatite-nepheline deposits. Gor. zhur.
no.12:47-49 D '62. (MIRA 15:11)

1. Institut gornogo dela im. Skochinskogo, Moskva.
(Khibiny Mountains—Mine gases)

VOYTOV, M. I.; KHAUSTOVICH, N. A. (Veterinarian)

"Treatment of swine erysipelas with penicillin."

SO: Veterinariya 26 (11), 1949, p. 33

Minsk City Veterinary Polyclinic

VOYTOV, M. L.

USSR/Medicine - Penicillin Erysipelas

Nov 49

"Treatment of Swine Erysipelas With Penicillin," N. A. Khaustovich, M. L. Voytov,
Veterinarians, Minsk Mun Vet Polyclinic, 14 pp

"Veterinariya" No 11

Effectuated complete recovery of 16 cases of swine erysipelas by treatment with three penicillin injections; initial injection of 100-250 IU, followed after 3 hr by one of 100 units, and after 18-20 hr by third injection of 100 units. This treatment is faster acting and less expensive than antierysipelas serum (required penicillin costs 5 rubles; serum 6). States desirability of supplying penicillin to general veterinary practice, where it would find variety of uses for diseases in agricultural animals.

PA 159T45

VOYTOV, P., kand.sel'skokhozyaystvennykh nauk

Mechanized cultivation of vegetables and potatoes. Tekh.v sel'khoz.
19 no.5:20-22 My '59. (MIRA 12:7)
(Potatoes) (Vegetable gardening) (Agricultural machinery)

VOYTOV, P., kand.sel'skokhoz.nauk

Mechanized weed control. Tekh. v sel'khoz. 20 no.7:22-24
Jl '60. (MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy
i agropochvovedeniya.
(Weed control)

VOYTOV, P., kand.sel'skokhozyaystvennykh nauk

Grow vegetables in flood lands. Nauka i pered.op.v sel'khoz.
9 no.1:17-20 Ja '59. (MIRA 13:3)
(Vegetable gardening)

1. VOYTOV, P. I.
2. USSR (600)
4. Vegetable Gardening
7. Mechanization of basic processes in growing vegetable crops. Dost.sel'khoz.
no. 1, 1951.

9. Monthly List of Russian Accessions, Library of Congress, JANUARY 1953. Unclassified.

VOYTOV, P. I.

Vegetable Gardening

Mechanization of basic work in the cultivation of vegetable crops; Sad. 1 og.
no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

1. VOYTOV, P.I.
2. USSR (600)
4. Agricultural Machinery
7. For all-over mechanization in vegetable gardening, Sad 1 og. no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

VOYTOV, P. I.

Voytov, P. I. - "The Agricultural-Engineering and Economic Effectiveness of Mechanized Cultivation of Carrots, Based on the Experience of Kolkhozes in the Moscow Suburban Zone." Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev. Moscow, 1956 (Dissertation for the Degree of Candidate in Agricultural Sciences).

So: Knizhnaya Letopis', No. 10, 1956, pp 116-127

VOYTOV Pavel Ivanovich; KRYUKOV, V.L.; GUREVICH, M.M., tekhnicheskii
redaktor

[Mechanization of vegetable cultivation] Mekhanizatsia vosdelyva-
niia ovoshchnykh kul'tur. Moskva, Gos. izd-vo selkhoz. lit-ry,
1956. 164 p. (MLRA 9:9)
(Vegetable gardening) (Agricultural machinery)

VOYTOV, P. I. Cand Agr Sci -- (diss) "The agricultural-engineering and economic effectiveness of mechanized cultivation of carrots. According to ^{the} experiments ~~in~~ ^{the} kolkhozes of Moscow suburban area." Mos, 1957. 16 pp 20 cm. (Mos Order of Lenin Agr Acad im K. A. Timiryazev), 110 copies (KL, 24-57, 119)

VOYTOV, P.I., red.; KAZAKOVA, Ye.D., red.; ZUBRILINA, Z.P., tekhn.red.

[Growing vegetables on bottom land] Vyrashchivanie ovoshchei
na poimennykh zemliakh. Moskva, Gos. izd-vo sel'khoz. lit-ry,
1958. 165 p. (MIRA 12:1)
(Vegetable gardening)

LADONIN, Vadim Feopentovich, kand. sel'khoz. nauk; VOYTOV, Pavel
Ivanovich, kand. sel'khoz. nauk; ZELENETSKAYA, L.V., red.;
LEVINA, L.G., tekhn. red.

[Herbicides and the mechanization of their use; text book
for agrochemical compulsory education] Gerbitsidy i mekhani-
zatsiia ikh vneseniia; posobie dlia agrokhimicheskogo vse-
obucha. Moskva, Rossel'khozizdat, 1964. 124 p.
(MIRA 17:3)

VOYTOV, Pavel Ivanovich; SHULEYKIN, P.A., red.; RAKITIN, I.T.,
tekhn. red.

[Chemistry and harvest] Khimiia i urozhai. Moskva, Izd-
vo "Znanie," 1963. 30 p. (Narodnyi universitet kul'tury:
Sel'skokhoziaistvennyi fakul'tet, no.6) (MIRA 16:5)
(Agricultural chemicals)

VOITOV, Pavel Ivanovich, kand. sel'skokhoz. nauk; ROZIN, M., red.;
SHKOL'NIKOV, A., red.; KUZNETSOVA, A., tekhn. red.

[Machines and attachments for the placement of liquid fertilizers;
Mashiny i prispособleniia dlia vneseniia zhidkikh udobrenii.
Moskva, Mosk. rabochii, 1963. 85 p. (MIRA 16:6)
(Fertilizer spreaders)

VOYTOV, P.I., kand.sel'skokhozyaystvennykh nauk

Mechanization of the application of herbicides. Zashch. rast. ot
vred. i bol. 7 no.3:37-38 Mr '62. (MIRA 15:11)
(Herbicides)

VOYTOV, P.I., kand.sel'skokhozyaystvennykh nauk

Machinery for the application of liquid fertilizers. Zemledelie
23 no.11:68-70 N '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy i
agropochvovedeniya.

(Fertilizer spreaders)

VOYTOV, Pavel Ivanovich, kand. sel'khoz. nauk; VASIL'YEVA, Ye., red.;
PAVLOVA, S., tekhn. red.

[Care of corn fields] Ukhod za posevami. Moskva, Mosk, rabochii,
1961. 21 p. (MIRA 14:7)

(Corn (Maize))

VOYTOV, P. I., kand. sel'skokhoz. nauk

Mechanized herbicide placement. Zashch. rast. ot vred. 1 bol. 5
no. 4:40-43 Ap '60. (MIRA 13:9)
(Spraying and dusting equipment)

VOYTOV, Vitaliy Ivanovich; PONOMAREVA, Larisa Anatol'yevna;
PERVAKOV, I.L., red.; CHERNYKH, M.P., mladshiy red.;
BURLAKA, N.P., tekhn. red.

[Off the sea lanes] V storone ot morskikh dorog. Moskva,
Geografiz, 1962. 101 p. (MIRA 16:6)
(Pacific Ocean--Description and travel)

VOYTOV, Vitaliy Ivanovich; PONOMAREVA, Larisa Anatol'yevna; PERVAKOV,
I.L., red.; CHERNYKH M.P., mladshiy red.; BURLAKA, N.P.,
tekhn. red.

[Away from the ocean routes] V storone ot morskikh dorog. Mo-
skva, Geografiz, 1962. 101 p. (MIRA 16:1)
(Far East--Description and travel)
(Far East--Oceanographic research)

VOYTOV, V.I., kand.geograf.nauk

Seaways to Polynesia. Priroda 54 no.2:80-89 F '65.

(MIRA 18:10)

1. Institut oksanologii AN SSSR, Moskva.

3(9)

AUTHORS:

SOV/26-59-4-15/43
Ponomareva, L.A., Candidate of Biological Sciences
and Voytov, V.I.

TITLE:

On the Hermit Atoll (Na atolle Khermit)

PERIODICAL:

Priroda, 1959, Nr 4, pp 70-72 (USSR)

ABSTRACT:

In the spring of 1959, an expedition of the Institute of Oceanography of the AS USSR on board the ship "Vityaz'" carried out research on the west part of the Pacific within the framework of the International Geophysical Year. On May 12, the expedition visited the Hermit Atoll, situated about 90 miles north-west of the Admiralty Island in the New Guinea Sea. Taking the fauna of the Hermit Atoll as an example for the Pacific islands' fauna in general, the authors give a detailed description of it. Among other findings the authors mention the Pagurus, Birgus latro, Nautilus, talitridae, Halimeda, Madreporaria, Milleporidae (Hydrozoa), Alcyonaria and Octocorallia,

Card 1/2

On the Hermit Atoll

SOV/26-59-4-15/43

Scomber japonica, Tetradontidae, Trochus, Spondilus,
Tridakna, etc. There are 1 photo and 1 graph.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Moskva)
(Institute of Oceanography of the AS USSR)

Card 2/2

(VOYTOV, Y.I.; YEGOROVA, A.A.; TARASOV, N.I.

Luminiscence of cultures of the free-moving Bacterium
Issatchenkoi Egorova from the Black Sea. Dokl.AN SSSR
132 no.6:1425-1426 Je '60. (MIRA 13:6)

1. Institut mikrobiologii Akademii nauk SSSR. Predstavleno
akademikom V.N.Shaposhnikovym.
(BLACK SEA--BACTERIA, LUMINOUS)
(TRYPTONE)

VOYTOV, V.I.

~~Optical~~ characteristics of water masses as indexes of processes
of turbulent mixing in the sea. Okeanologiya 4 no.3:386-395 '64
(MIRA 18:1)

1. Institut okeanologii AN SSSR.

VOYTOV, V.K., tekhnik

Replacement of insulators without removing the core in transformers
with ratings up to 5,600 kv.-a. Energetik 10 no.4:26-27 Ap
'62. (MIRA 15:4)

(Electric transformers--Maintenance and repair)

KOTEL'NIKOV, V.A.; APRAKSIN, L.V.; VOYTOV, V.O.; GOLUBTSOV, M.G.;
DUBROVIN, V.M.; ZAYTSEV, N.M.; KORENBERG, Ye.B.; MINASHIN, V.P.;
MOROZOV, V.A.; NIKITSKIY, N.I.; PETROV, G.M.; RZHIGA, O.N.;
SHAKHOVSKOY, A.M.

Radar system used in the Venus probe of 1961. Radiotekh.
i elektron. 7 no.11:1851-1859 N '62. (MIRA 15:11)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Radar)
(Venus probes)

VOYTOVA, L., aspirantka

Effect of microelements and herbicides on the disease
resistance of barley. Zashch. rast. ot vred. i bol. 10
no.10:20-21 '65. (MIRA 18:12)

1. Belorusskaya sel'skokhozyaystvennaya akademiya.

VOYTOVA, L.R., assistant

Infection of barley with the fungus *Helminthosporium gramineum*
Rabh. Zashch. rast. ot vred. i bol. 8 no.6:26-27 Je '63.
(MIRA 16:8)

1. Belorusskaya sel'skokhozyaystvennaya akademiya, Gorki.
(White Russia---Barley---Diseases and pests)
(White Russia---Helminthosporium)

VOYTOVA, N.A.

Increasing the capacity of welding motors. Energ. biul. no. 12:
1-8 D '55. (MLRA 9:2)
(Electric drive) (noting)

Voytova N.A.

AID P - 3983

Subject : USSR/Engineering - Electricity

Card 1/1 Pub. 28 - 1/11

Author : Voytova, N. A.

Title : Problem of Increasing Power of Motors Driving Drilling Installations.

Periodical : Energ. byul., 12, 1-6, D 1955

Abstract : The author analyses the operation of drilling installations powered by the MAB and MAD-type induction motors, and concludes that a further increase of power beyond 800 kw is not necessary. More efficiency of operation could be obtained by reducing the time lost in manual auxiliary operations. He suggests further mechanization and 'automation' of drilling process. Three graphs, 3 tables, and 9 Russian references.

Institution : None

Submitted : No date

VEDENKIN, D.P., inzh., red.; ZASLAVSKIY, Ye.I., inzh., red.;
KOVAL'SKIY, L.Ya., inzh., red.; VOYTOVA, V.P., inzh.,
red.; SHELIKHOV, S.N., inzh., red.; NEUDAKIN, K.A., red.

[Price list for the assembly of equipment] TSennik na
montazh oborudovaniia. Moskva, Stroiizdat. No.11. 1965.
104 p. (MIRA 18:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po de-
lam stroitel'stva. 2. Gosstroy SSSR (for Vedenkin).
3. Nauchno-issledovatel'skiy institut ekonomiki stroitel'-
stva Gosstroya SSSR (for Zaslavskiy, Koval'skiy, Voytova).
4. Proyektno-konstrukterskoye byuro No.12 Glavmontazhavto-
matiki (for Neudakin). 5. Vsesoyuznyy bank finansirovaniya
kapital'nykh vlozheniy SSSR (for Shelikhov).

VOYTOVA, Ye. L.

"Evaluation of addition algorithm complexity"

report submitted for the Intl. Symposium on Relay Systems and Finite Automata Theory (IFAC), Moscow, 24 Sep-2 Oct 1962.

9.7100

S/194/61/000/006/013/077
D201/D302

AUTHORS:

Glushkov, V.M., Rabinovich, Z.L. and Voytova, Ye.L.

TITLE:

Analysis of trigger transients by an electron digital computer

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1961, 38, abstract 6 B282 (V sb. Vses. Mezhvuz. konferentsiya po teorii metodam rascheta nelineynykh elektr. tsepey, no. 2-П (P), Tashkent, 1960, 95-112)

TEXT: Description of methods used and of certain preliminary results of mathematical analysis by the computer 'Ural' of transients of a trigger are given. The analysis was undertaken in order to explain certain fine details of the mechanism of trigger operation and to determine possible ways of its design from the point of view of its operating reliability. The trigger circuit investigated was that used in the БЭСМ (BESH) computer. The analysis was

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VB

Analysis of trigger transients...

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D201/D302

performed by means of the actual solution of a system of non-linear differential equations by the 'Ural' computer. It was thus possible to analyze the mechanism of trigger operation and to understand the relationship between the reliability of the switch-over and the speed of trigger operation. The preliminary results of the analysis are given. 11 figures. 4 references. [Abstracter's note: Complete translation]

VB

Card 2/2

ORG: none

Andon, F. I.; Brona, I. I.; Voytova, Ye. L.; Kapitonova, Yu. V.
LIP(c) BB/GG/GD
SOURCE CODE: UR/0000/65/000/000/0035/0041

TITLE: A small system for the projection of digital automaton circuits
SOURCE: AN UkrSSR. Voprosy teoreticheskoy kibernetiki (Problems in theoretical cybernetics), Kiev, Naukova dumka, 1965, 35-41

TOPIC TAGS: digital computer, automaton, circuit design, Boolean algebra
ABSTRACT: The authors discuss the synthesis of logical devices, consisting in the construction of a reliable functional system to satisfy the specific requirements imposed on the device. Almost all the terms and concepts used by the authors are taken from V. M. Glushkov's book (Sintez tsifrovyykh avtomatov. Fizmatgiz, M., 1932). The synthesis problem, as it applies to a specific case, is formulated as follows: on the basis of a prescribed mapping a functional arrangement is constructed having prescribed characteristics. The program system which involves this problem (a small automation system for the projection of digital automaton arrangements) is described in detail. The entire process of device synthesis is divided into the following six stages: 1) testing of the mapping for automaticity; 2) synthesis (in the case of automaton

SUB C

L 35915-66 EWT(d)/ENP(1) IJF(c) GG/BB/GD

ACC NR: AT6017029

SOURCE CODE: UR/0000/65/000/000/0027/0041

AUTHOR: Voytovich, I. D.

ORG: None

TITLE: Allowances for control currents in a cryotron memory device

SOURCE: AN UkrSSR. Kiberneticheskaya tekhnika (Cybernetic techniques). Kiev, Naukova dumka, 1965, 27-41

TOPIC TAGS: circuit design, memory core, memory access technique, pulse signal, signal analysis, electric current

ABSTRACT: This article investigates a type Z cryotron memory device consisting of tricryotron elements (Fig. 1). Formulas are derived by means of which the boundary values of control currents are determined as a function of the geometric parameters of memory cells and individual cryotrons. Such factors of unreliability as solders, plug joints, internal noise, and external interference are reduced to a minimum in the film cryotron circuits. Therefore, allowances for the control currents in these circuits are the main criteria of their reliability. The principle proposed for the calculation of the allowances for the control currents is applicable to any cryotron memory device and to many cryotron logic circuits.

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ACC NR: AT6017029

- a) digit number recording current
- b) digit number reading current
- c) address recording current
- d) address reading current

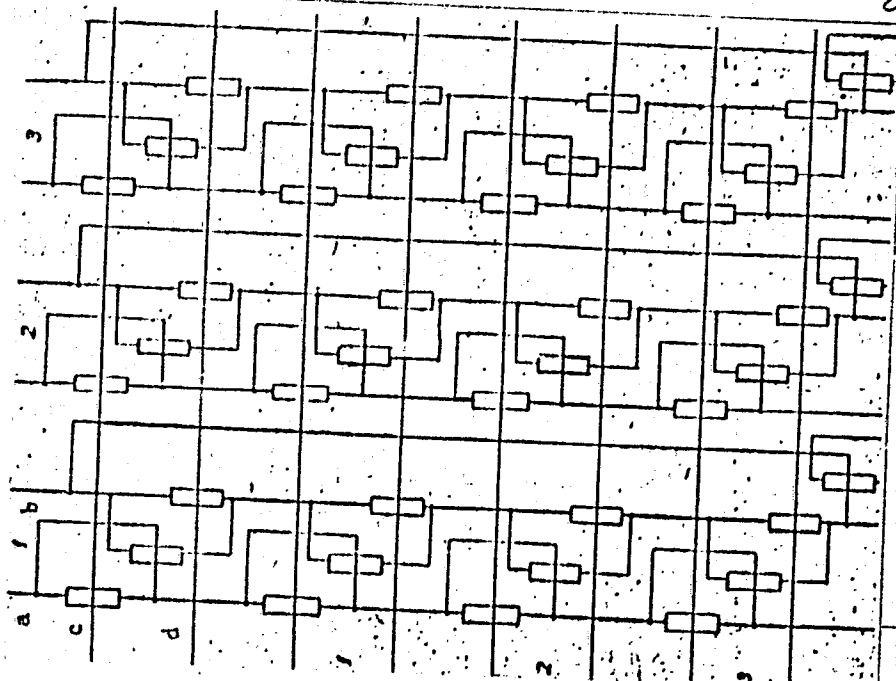


Fig. 1. Tricryotron memory device.

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ACC NR: AT6017029

It is concluded that the formulas for calculating the allowances and two of the examples presented indicate that the parameters of modern film cryotrons make it possible to change three of the control currents studied (the digit number recording current, the address recording current, and the address reading current) of the memory device studied within the limits of $\pm 30\%$ and higher. Allowances for the digit number reading current present more difficulties; the author recommends redesigning the reading circuits and their modes of operation before designing cryotron memory circuits. Orig. art. has: 31 formulas and 3 figures.

SUB CODE: 09/ SUBM DATE: 28Jul65/ ORIG REF: 001/ OTH REF: 002

Card 3/3 *ell*

L 40104-66 EWT(Δ)/ENP(t)/ETI IJP(c) JW/JD/HW/JQ/WB

ACC NR: AP6019569

SOURCE CODE: UR/0080/66/039/006/1418/1422

AUTHOR: Voytovich, R. F.

ORG: Institute of Materials Science Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Oxidation rate of niobium-iron and niobium-cobalt alloys at high temperatures

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 6, 1966, 1418-1422

TOPIC TAGS: niobium alloy, iron alloy, cobalt alloy, metal scaling, metal oxidation

ABSTRACT: The scaling of pure iron, cobalt, and alloys of niobium with iron (10, 30, 50, 70, 90 wt.%) and niobium with cobalt (10, 30, 50, 70, 90 wt.%) was studied in the 500-900°C range in air. The oxidation curves of the alloys showed that the alloying of niobium with iron and of iron with niobium causes a substantial increase in the oxidation resistance of the metals; alloying of niobium with up to 30% cobalt causes a marked increase in the scaling resistance of niobium, whereas the addition of niobium (in amounts up to 30%) to cobalt gives rise to an extensive scaling of cobalt at 800-900°C. Values of the free energies of possible oxidation-reduction reactions in the scale and their equilibrium constants were calculated for various temperatures for both types of alloys. Results of these calculations indicate that in Nb-Fe alloys, the predominant reaction taking place is the reduction of iron oxides to pure iron and the formation of Nb₂O₅; this increases the corrosion resistance of the al-

Cord 1/2

UDC: 541.124/128+546.3-19'882'72+546.3-19'822'73

L 40104-66

ACC NR: AP6019569

loys, since the defect phase FeO, which speeds up the oxidation rate, is eliminated from the sphere of the reaction. In the scale of Nb-Co alloys, CoO is reduced to cobalt; x-ray analysis showed the presence of Nb₂O₅, Co₃O₄, CoO, FeO, and of small amounts of iron and cobalt. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07, 11/ SUBM DATE: 13Sep63/ ORIG REF: 001/ OTH REF: 002

Card

2/2 *ll*

POLYAKOVA, V.M.; FAYNERMAN, A.Ye.; VOYTSEKHOVSKIY, R.V.

Use of diffusion salting-out for evaluating the molecular weight distribution of poly- ϵ -caproamide. Vysokom. soed 6 no.3:432-433 Mr'64. (MIRA 17:5)

1. Institut khimii polimerov i monomerov AN UkrSSR.

VOYTOVETSKIY, V.G.; TOLMACHEVA, N.S.

Lithium silicate glasses as scintillators for the detection of
slow neutrons. Atom. energ. 6 no.4:472-474 Ap '59.

(Scintillation counters) (Neutrons) (Glass) (MIRA 12:5)

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120015-6

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120015-6"

21(4)

AUTHORS:

Voytovetskiy, V. K., Tolmacheva, N. S., Arsayev, M. I. SOV/89-6-3-11/29

TITLE:

A Scintillating Glass for Detecting Slow Neutrons (Stsintill-yatsionnoye steklo dlya detektirovaniya medlennykh neytronov)

PERIODICAL:

Atomnaya energiya, 1959, Vol 6, Nr 3, pp 321 - 326 (USSR)

ABSTRACT:

The composition and the activator of a scintillating glass must be chosen in such a way that their spectra are within the range of maximum sensitivity of the photomultiplier and do not intersect with the absorption spectrum. A series of glass types was produced ($\text{Li}_2\text{O} \cdot \text{SiO}_2$, $\text{Li}_2\text{O} \cdot 2\text{SiO}_2$, $1/4 \text{Li}_2\text{O} \cdot 1/2 \text{Na}_2\text{O} \cdot 2\text{SiO}_2$, $1/2 \text{Li}_2\text{O} \cdot 1/2 \text{K}_2\text{O} \cdot 2\text{SiO}_2$, $1/3 \text{Li}_2\text{O} \cdot 1/3 \text{Rb}_2\text{O} \cdot 2\text{SiO}_2$, $\text{Li}_2\text{O} \cdot \text{CaO} \cdot 2\text{SiO}_2$) which were activated with Ce. Glass of the type $\text{Li}_2\text{O} \cdot 2\text{SiO}_2$ proved to be the most convenient if it was activated with 2 mol-% Ce. The glasses were produced in the following way: carbonic acid salts of Li, Ca, Na, K, Rb, and SiO_2 were mixed at certain weight proportions and a titrated solution of trivalent $\text{Ce}(\text{CeCl}_3)$ was added to

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A Scintillating Glass for Detecting Slow Neutrons

SOV/89-6-3-11/29

this mixture. Furthermore, distilled water was added to this mixture until a viscous mass formed which was trituated in a porcelain crucible during one hour. Then the mass was dried at 100°C and annealed for 20 min at 800°C. The production of the enamel which followed was made in a corundum container at a temperature of from 1250-1300°C. After about 2-3 hours the enamel had become transparent. It was poured into a cold metallic mold and the disk-shaped pieces of glass thus produced were after-treated in a muffle furnace heated to 500°C during 30 minutes. The scintillating efficiency of the types of glass - due to electron excitation - was measured by a comparison with the scintillating efficiency of a NaJ(Tl) crystal in a scintillation-Compton spectrometer. In this connection the efficiency of the glass is 1.4% of the NaJ(Tl)-crystal. The ratio between the scintillation yields of electrons and α -particles was measured 3.8 - 4. Luminescence of a scintillation flash is about 0.15 μ sec. If the glass has a thickness of 1 mm and contains lithium enriched with Li^6 to 90.5% it has an efficiency of 82% for thermal neutrons. If the glass is 5 mm thick its efficiency

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A Scintillating Glass for Detecting Slow Neutrons

SOV/89-6-3-11/29

decreases to 40% in the detection of 10 ev-neutrons. The sensitivity of glass to fast neutrons is low and attains an optimum efficiency of 0.05% at a thickness of 1 mm of the glass. Z. M. Karpova assisted in the production of the glass samples. There are 9 figures, 1 table, and 11 references, 5 of which are Soviet.

SUBMITTED: October 25, 1958

Card 3/3

21(1), 21(8)
AUTHORS:

SOV/89-6-4-13/27

Voytovetskiy, V. K., Tolmacheva, N. S.

TITLE:

Lithium Silicate Scintillation Glasses for the Detection of Slow Neutrons (Litiy-silikatnyye stsintillyatsionnyye stekla dlya detektirovaniya medlennykh neytronov)

PERIODICAL:

Atomnaya energiya, 1959, Vol 6, Nr 4, pp 472-474 (USSR)

ABSTRACT:

From the results obtained by the previous paper (Ref 1) it was to be expected that by an increase of the acid component in the $\text{Li}_2\text{O}_3 \cdot \text{SiO}_2(\text{Ce})$ -glasses their scintillation sensitivity in wide ranges could be increased. It was found that in the case of a high silicon oxide content the lithium-silicate compounds in the glass-forming state are not stable ($\text{LiO}_2 \cdot 3\text{SiO}_2(\text{Ce})$ already opalesces). The addition of other glass-forming substances such as phosphorus or boron causes no increase of the light yield. In glass of the type $\text{LiO}_2 \cdot 3\text{SiO}_2$, additions of Al_2O_3 in different quantities were tried out. At a 0.08 M Al_2O_3 concentration a maximum scintillation effect is observed (the yield curves are given). For a glass of the type $\text{Li}_2\text{O} \cdot 3\text{SiO}_2 \cdot 0.08 \text{ Al}_2\text{O}_3(\text{Ce})$ having a thickness of 0.2 cm

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SOV/89-6-4-13/27

Lithium Silicate Scintillation Glasses for the Detection of Slow Neutrons

the scintillation efficiency is higher by 3% than in the case of a NaJ(Tl)-crystal. Ce-concentration was varied within a range of from 0.01 to 1.015 CeO₂. The dependence of the degree of efficiency of scintillation ² of the thickness of the glass shows that the increase of the SiO₂-content leads to the production of opaque glasses, whereas an addition of aluminum oxide increases not only the light yield but also the degree of transparency. By means of the scintillator LiO₂.3SiO₂.0.08 Al₂O₃ (Ce) (in connection with the multiplier FEU-S) the differential-amplitude spectrum of a Po+Be-neutron source was recorded. A similar recording was made for a neutron beam emitted from a reactor, in which case the lithium in the scintillator consisted of 90.5% Li⁶. The efficiency of this glass with respect to a thermal neutron flux incident vertically upon the scintillator attains an amount of 90%. There are 5 figures and 2 Soviet references.

SUBMITTED: September 20, 1958

Card 2/2

STARTSEV, V.I., otv. red.; ALEKSANDROV, B.S., red.; BELYAYEV, L.M.,
red.; BRUDZ', V.G., red.; VOYTOVETSKIY, V.K., red.;
GALANIN, M.D., red.; DISTANOV, B.G., red.; KLIMOV, A.P.,
red.; SEMENENKO, M.G., red.; SHAMOVSKIY, L.M., red.

[Scintillators and scintillation materials] Stsintilliatory i
stsintilliatSIONnye materialy. Moskva, Gos. komitet Soveta
Ministrov SSSR po khimii, 1960. 319 p. (MIRA 15:4)

1. Koordinatsionnoye soveshchaniye po stsintilliatoram. 2nd, 1957.
(Scintillation counters)

22879
S/089/61/010/005/007/015
B102/B214

26.2263
AUTHORS: Voytovetskiy, V. K., Tolmacheva, N. S.

TITLE: Scintillation glasses with increased light yield for neutron detection

PERIODICAL: Atomnaya energiya, v. 10, no. 5, 1961, 504

TEXT: It is known that the light yield of cerium activated luminescence glasses increases with the Ce(III) content. However, if such a glass is made in a neutral medium the Ce(IV) predominates leading to a coloring of the glass. The lithium silicate glasses with 0.01-0.015 cerium content were found to be optimal, for the effect of Ce(IV) became marked at higher cerium content. It could now be shown that if the glass is made in a reducing medium relatively large quantities of the activator can be kept in trivalent state; that is it was possible to increase the cerium content up to 0.1 without the appearance of color. The present "Letter to the Editor" is a report of these experiments. The glasses were made of especially pure materials (the Fe_2O_3 content was $<10^{-3}\%$); the graphite powder mixture was added for reduction. The mass was heated in alundum

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Scintillation glasses with increased...

crucibles in the silicon carbide furnace at 1250-1270°C. In the course of one hour the temperature was increased to 1370-1400°C and melting was continued till glass was formed. For some compositions a temperature increase to 1460°C for a short time was necessary. Then the mass was pressed in cold forms so that disks 3.5-4 cm in diameter were obtained. These glasses were subjected to a thermal treatment at 500°C in a muffle furnace. The scintillation efficiency of thin $\text{Li}_2\text{O} \cdot 3\text{SiO}_2 \cdot 0.08\text{Al}_2\text{O}_3$ glasses remained unchanged for cerium concentrations of 0.05-0.1 and amounted to 8-9 % (on excitation by electrons) of the scintillation efficiency of NaI(Tl) crystals. For glasses of 1 cm thickness the optimal content of cerium was 0.05-0.06. On scintillation excitation by the reaction products of thermal neutrons with Li^6 of $\text{Li}_2\text{O} \cdot 3\text{SiO}_2 \cdot 0.08\text{Al}_2\text{O}_3 \cdot 0.1\text{CeO}_2$ glasses in scintillation counters a half width of the peak of 22.5 % was reached. A further increase of the scintillation efficiency can be obtained with more complicated compositions of the glasses, as, for example, 11 % of $\text{Li}_2\text{O} \cdot 0.5\text{CaO} \cdot 4\text{SiO}_2 \cdot 0.13\text{Al}_2\text{O}_3 \cdot 0.1\text{CeO}_2$. With increasing thickness of the glass the optimal content of cerium decreases and approaches the value

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22879

S/089/61/010/005/007/015
B102/B214

Scintillation glasses with increased...

O.06. Finally the authors report on the results of Ref. 4 (on boron glasses in scintillation neutron detectors). There are 1 figure and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 4: L. Bollinger, G. Thomas, R. Ginther. Rev. Scient. Instrum. 30, 1135 (1959).

SUBMITTED: August 1, 1960

X

Card 3/3

VOYTOVETSKIY, V.K.; KORSUNSKIY, I.L.

Method of detecting α particles and fission fragments with a
scintillation counter in the presence of a strong β - or γ -background.
Atom.energ. 10 no.5:505-506 My '61. (MIRA 14:5)
(Alpha rays) (Scintillation counters)

TOTSKIY, I.A., Cand Phys Math Sci -- (diss) "Angular distribution of elastically dispersed neutrons with an initial energy of 2.8 million electron volts." Kiev, 1958, 8 pp with graphs (Acad Sci UkSSR. Inst of Physics) 200 copies (KL, 50-58, 120)

- 13 -

FODOR, O.; DUMITRASCU, D.; BADEA, Gh.; BAN. A.; TRACOR, S.; CALU, C.;
SZANTAY, I.

Adaptive and pathological changes in the jejunum and ileum
after stomach surgery. Stud. cercet. med. intern. 5 no.2:167-
172 '64

TRAGOV, A.G.

Calculating the dispersion characteristics of iris wave guides.
Uskoriteli no. 4:127-146 '62.

Calculating the intensity of the accelerating field in an iris
wave guide. Ibid.:147-157 (MIRA 17:5)

VOYTOVETSKIY, V.K.; KORSUNSKIY, I.L.; PAZHIN, Yu.F.

Neutron-neutron interaction in the S-state. Zhur. eksp. i teor.
fiz. 47 no.5:1612-1627 N '64.

Angular distribution of protons emitted in the reaction $D(N, p)2n$.
Ibid.:1628-1630 (MIRA 18:2)

... .. V. K.; Korsunskiy, I. D.;

... .. computer calibration spectroscopy

amplified, and

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1. The first part of the document is a list of the names of the persons who were present at the meeting.

2. The second part of the document is a list of the names of the persons who were present at the meeting.

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SECRET 1608-1640

ABSTRACT: 1608-1640 ACCESSION NO. 001861120015-6

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APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120015-6"

VOYTOVETSKIY, V. K.; KORSUNSKIY, I. L.; PAZHIN, Y F.

"S-state neutron interaction."

report submitted for Intl Conf on Low & Medium Energies Nuclear Physics,
Paris, 2-8 Jul 64.

VOYTKUNSKIY, Yaroslav Iosifovich; SOLOV'YEV, V.I., kand. tekhn.
nauk, retsenzent; GIRS, I.V., kand. tekhn. nauk, nauchn.
red.; BRITSYNA, I.M., red.

[Resistance of water to the movement of ships] Soprotivle-
nie vody dvizheniiu sudov. Leningrad, Sudostroenie, 1964.
411 p. (MIRA 17:8)

VOYTOVICH, A.P. [Vaitovich, A.P.]; PRIMA, A.M. [Pryma, A.M.]; BORISEVICH,
N.A. [Barysevich, M.A.]

Determining the optical constants of synthetic quartz in the
infrared spectral region. Vestsi AN BSSR. Ser. fiz.-tekhn. nav.
no.2:39-43 '64. (MIRA 18:1)

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120015-6

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CIA-RDP86-00513R001861120015-6"

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120015-6

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120015-6"

VOYTOVICH, A.P.; KATSEV, I.L.

Dependence of oscillation power on the amount of losses in a
gas laser. Zhur. prikl. spekt. 3 no.1:38-41 J1 '65. (MIRA 18:9)

L 44342-66 EWT(1)/T IJP(c)

ACC NR: AP6019658

SOURCE CODE: UR/0368/66/004/006/0563/0564

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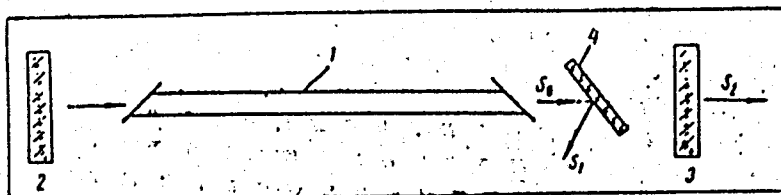
ORG: none

TITLE: Measurement of the transmission coefficient of high-reflection mirrors

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 6, 1966, 563-564

TOPIC TAGS: magnetic mirror, gas laser, solid state laser, light reflection coefficient

ABSTRACT: The authors describe a method of measuring the transmission coefficients (T) of mirrors during laser operation. A schematic diagram of the device used is given in Fig. 1.



Schematic of the device:
1 - tube containing active substance; 2 - resonator mirror; 3 - mirror, the T of which is being determined; 4 - extraction plate.

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An extraction nonabsorbent plate is located at a specific angle to the resonator axis in the resonator of a gaseous laser. The relative error of T determination is approximately 10%. Three independent measurements of T for two mirrors produced the following results: 0.0021, 0.0022, and 0.0022 for the first mirror, and 0.0027, 0.0023, and 0.0025 for the second mirror. The method proposed may be used for the measurement of the reflection from Brewster windows, as well as for the determination of the parameters of mirrors in solid-state lasers. Orig. art. has: 1 figure and 3 formulas.

SUB CODE: 20/ SUBM DATE: 09Jan65/ ORIG REF: 002

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